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order to obtain sufficient lubrication effect, a lubricant or the like is preferably applied to the lens receiving section 7. Subsequently, the enclosing member 5 into which the deformable intraocular lens 1 is placed is fitted into the holder 8 as shown in FIGS. 22 and 23. Thus, the enclosing member 5 is accommodated within the holder 8, and is maintained in a completely closed state as shown in FIGS. 24 and 25.

Through the above-described operation, the exterior size of the deformable intraocular lens is reduced. Since the size of the deformable intraocular lens can be reduced through the operation of fitting the enclosing member into the holder, the operation is very easy.

In the sixth embodiment, the enclosing member and the holder are preferably formed of a transparent material such as a transparent resin. In this case, since the state of the deformed intraocular lens can be checked, the degree of safety is increased.

In each of other embodiments, the enclosing member and the holder or the engagement member are preferably formed of a transparent material such as a transparent resin. In this case, since the state of the deformed intraocular lens can be checked, the degree of safety is increased.

In the case where the enclosing member is formed of a transparent material such as a transparent resin and the holder is formed of an opaque material such as metal or opaque resin, an opening serving as an observation window may be formed in the holder in order to allow an operator to check the state of the deformed intraocular lens. In this case as well, the degree of safety is increased.

In the first to fourth and sixth embodiments, the enclosing member has two hinges. However, a larger number of hinge portions may be provided. The above-described benefits of the present invention can be attained in this case as well.

In the above-described embodiments, the holder is an independent part. However, there can be employed a structure in which the holder is integrally built in the body of the insertion device. Also, the enclosing member having hinge portions may be formed as an independent part. Further, there can be employed a structure in which the holder and the enclosing member having hinge portions are integrated together and are independent of the body of the insertion device.

In the above-described embodiments, descriptions have been given of the case where a deformable intraocular lens for cataract treatment is inserted into the eye. However, the present invention can be applied to the case where other kinds of deformable intraocular lens such as a vision correction lens is inserted into the eye. In the above-described embodiments, the enclosing member is integral with the body of the insertion device. However, the enclosing member may have a structure that allows removable attachment of the enclosing member to the body. In this case, the enclosing member and/or the body may be repeatedly used through sterilization.

In the above-described embodiments, a push rod is employed to push out a deformable intraocular lens into the eye. However, other mechanisms may be employed to push out the deformable intraocular lens into the eye.

In the fifth embodiment, when the enclosing member is formed of a transparent material such as a transparent resin, the state of the deformed intraocular lens can be checked, so that the degree of safety is increased.

In the above-described embodiments, a deformable intraocular lens is held such that only the peripheral edge

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portion of the lens contacts the enclosing member. When a deformable intraocular lens having support portions projected from the optical portion with an angle is used, in addition to the structure for supporting the peripheral portion of the lens, there may be employed a structure for supporting the support portions of the lens by a part of the enclosing member or another independent member in order to maintain the angle formed between the support portions and the optical portion.

Obviously, numerous modifications and variations of the present invention are possible in light of the above teachings. It is therefore to be understood that within the scope of the appended claims, the present invention may be practiced otherwise than as specifically described herein.

What is claimed is:

1. An insertion device for inserting into an eye a deformable intraocular lens in which at least an optical portion is formed of an elastic material having predetermined memory characteristics or a deformable intraocular lens in which at least an optical portion is formed of an elastic material having predetermined memory characteristics and which has a supporting portion for supporting the optical portion within the eye, wherein said insertion device comprises an enclosing member having an open position for receiving the deformable intraocular lens and a closed position for holding the deformable intraocular lens in an enclosed manner, wherein at least a peripheral edge portion of the deformable intraocular lens is engaged with said enclosing member when the deformable intraocular lens is placed in the enclosing member and the enclosing member is in the open position, wherein the optical portion of the deformable intraocular lens substantially does not come into contact with the enclosing member when the enclosing member is in the open position, and wherein the deformable intraocular lens is deformed into a smaller size when the deformable intraocular lens is in the enclosing member and the enclosing member is closed from the open position to the closed position.

2. An insertion device for a deformable intraocular lens according to claim 1, wherein said peripheral edge portion of the lens is an outer circumferential edge of the optical portion of the lens.

3. An insertion device as claimed in claim 2, wherein said enclosing member is separated from a body of said insertion device, and said enclosing member engages said body when the deformable intraocular lens is inserted into the eye.

4. An insertion device for a deformable intraocular lens according to claim 1, wherein said enclosing member is separated from a body of said insertion device, and engages said body when the deformable intraocular lens is inserted into the eye.

5. An insertion device as claimed in claim 1, wherein said enclosing member has grooves on an inner surface in order to receive and hold the deformable intraocular lens.

6. An insertion device as claimed in claim 1, wherein said insertion device further comprises a holder for closing the enclosing member and maintaining the enclosing member in the closed position.

7. An insertion device as claimed in claim 6, wherein said insertion device further comprises a body, and wherein said enclosing member and said holder are integrally built in said body.

8. An insertion device as claimed in claim 6, wherein said enclosing member is an independent part.

9. An insertion device as claimed in claim 6, wherein said holder is an independent part.

10. An insertion device as claimed in claim 6, wherein said insertion device further comprises a body that is con-

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nected to said enclosing member and said holder, wherein said enclosing member and said holder are integrated together and are separated from said body.

11. An insertion device as claimed in claim 6, wherein said enclosing member and said holder are transparent.

12. An insertion device as claimed in claim 6, wherein said enclosing member is transparent and said holder has an opening serving as an observation window.

13. An insertion device as claimed in claim 1, wherein said enclosing member is transparent.

14. An insertion device as claimed in claim 1, wherein the enclosing member has grooves, wherein the peripheral edge of the deformable intraocular lens engages the grooves and the grooves support the deformable intraocular lens when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position, whereby the optical portion of the deformable intraocular lens substantially does not come into contact with the enclosing member when the enclosing member is in the open position.

15. An insertion device as claimed in claim 14, wherein the grooves having converging portions which are formed at front and rear sides of the grooves with respect to a pushing direction and which have a shape corresponding to a shape of the deformable intraocular lens.

16. An insertion device as claimed in claim 14, wherein the insertion device further comprises an insertion tube connected to the enclosing member, wherein the enclosing member has a front portion closest to the insertion tube and a rear portion farthest from the insertion tube, wherein the grooves have converging portions which are formed toward the front portion and the rear portion of the enclosing member, and wherein the converging portions have a shape corresponding to a shape of the deformable intraocular lens.

17. An insertion device as claimed in claim 1, wherein the enclosing member comprises at least two hinge portions, wherein the optical portion of the deformable intraocular lens substantially does not come into contact with the hinge portions when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position.

18. An insertion device as claimed in claim 1, wherein the enclosing member comprises hinge portions at two circumferential positions, wherein the optical portion of the deformable intraocular lens substantially does not come into contact with the hinge portions when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position.

19. An insertion device as claimed in claim 1, wherein the enclosing member comprises at least two hinge portions for opening and closing the enclosing member, wherein the enclosing member has grooves, wherein the peripheral edge of the deformable intraocular lens engages the grooves and the grooves support the deformable intraocular lens when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position, whereby the optical portion of the deformable intraocular lens substantially does not come into contact with the hinge portions when the enclosing member is in the open position.

20. An insertion device as claimed in claim 1, wherein the enclosing member comprises hinge portions at two circumferential positions for opening and closing the enclosing member, wherein the enclosing member has grooves, wherein the peripheral edge of the deformable intraocular lens engages the grooves and the grooves support the deformable intraocular lens when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position, whereby the optical portion of the

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deformable intraocular lens substantially does not come into contact with the hinge portions when the enclosing member is in the open position.

21. An insertion device for inserting into an eye a deformable intraocular lens in which at least an optical portion is formed of an elastic material having predetermined memory characteristics or a deformable intraocular lens in which at least an optical portion is formed of an elastic material having predetermined memory characteristics and which has a supporting portion for supporting the optical portion within the eye, said insertion device comprising:

(a) a body comprising an enclosing member, wherein the enclosing member has an open position for receiving the deformable intraocular lens and a closed position for holding the deformable intraocular lens in an enclosed manner; and

(b) a holder slidably connected to the body;

wherein the deformable intraocular lens is deformed into a smaller size when the deformable intraocular lens is in the enclosing member and the enclosing member is closed from the open position to the closed position; and

wherein when the holder is slid toward or over the enclosing member, the holder closes the enclosing member from the open position to the closed position.

22. An insertion device as claimed in claim 21, wherein said enclosing member and said holder are transparent.

23. An insertion device as claimed in claim 21, wherein said enclosing member is transparent and said holder has an opening serving as an observation window.

24. An insertion device as claimed in claim 21, wherein said enclosing member is transparent.

25. An insertion device as claimed in claim 21, wherein when the holder is slid toward or over the enclosing member, the holder contacts the enclosing member and gradually closes the enclosing member from the open position to the closed position and then maintains the enclosed member in the closed position.

26. An insertion device as claimed in claim 25, wherein at least a peripheral edge portion of the deformable intraocular lens is engaged with said enclosing member when the deformable intraocular lens is placed in the enclosing member and the enclosing member is in the open position, wherein the optical portion of the deformable intraocular lens substantially does not come into contact with the enclosing member when the enclosing member is in the open position.

27. An insertion device as claimed in claim 26, wherein the enclosing member has grooves, wherein the peripheral edge of the deformable intraocular lens engages the grooves and the grooves support the deformable intraocular lens when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position, whereby the optical portion of the deformable intraocular lens substantially does not come into contact with the enclosing member when the enclosing member is in the open position.

28. An insertion device as claimed in claim 26, wherein the enclosing member comprises at least two hinge portions, wherein the optical portion of the deformable intraocular lens substantially does not come into contact with the hinge portions when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position.

29. An insertion device as claimed in claim 26, wherein the enclosing member comprises hinge portions at two circumferential positions, wherein the optical portion of the

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deformable intraocular lens substantially does not come into contact with the hinge portions when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position.

30. An insertion device as claimed in claim 26, wherein the enclosing member comprises at least two hinge portions for opening and closing the enclosing member, wherein the enclosing member has grooves, wherein the peripheral edge of the deformable intraocular lens engages the grooves and the grooves support the deformable intraocular lens when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position, whereby the optical portion of the deformable intraocular lens substantially does not come into contact with the hinge portions when the enclosing member is in the open position.

31. An insertion device as claimed in claim 26, wherein the enclosing member comprises hinge portions at two circumferential positions for opening and closing the enclosing member, wherein the enclosing member has grooves, wherein the peripheral edge of the deformable intraocular lens engages the grooves and the grooves support the deformable intraocular lens when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position, whereby the optical portion of the deformable intraocular lens substantially does not come into contact with the hinge portions when the enclosing member is in the open position.

32. An insertion device as claimed in claim 21, wherein at least a peripheral edge portion of the deformable intraocular lens is engaged with said enclosing member when the deformable intraocular lens is placed in the enclosing member and the enclosing member is in the open position, wherein the optical portion of the deformable intraocular lens substantially does not come into contact with the enclosing member when the enclosing member is in the open position.

33. An insertion device as claimed in claim 32, wherein the enclosing member has grooves, wherein the peripheral edge of the deformable intraocular lens engages the grooves and the grooves support the deformable intraocular lens when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position, whereby the optical portion of the deformable intraocular

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lens substantially does not come into contact with the enclosing member when the enclosing member is in the open position.

34. An insertion device as claimed in claim 32, wherein the enclosing member comprises at least two hinge portions, wherein the optical portion of the deformable intraocular lens substantially does not come into contact with the hinge portions when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position.

35. An insertion device as claimed in claim 32, wherein the enclosing member comprises hinge portions at two circumferential positions, wherein the optical portion of the deformable intraocular lens substantially does not come into contact with the hinge portions when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position.

36. An insertion device as claimed in claim 32, wherein the enclosing member comprises at least two hinge portions for opening and closing the enclosing member, wherein the enclosing member has grooves, wherein the peripheral edge of the deformable intraocular lens engages the grooves and the grooves support the deformable intraocular lens when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position, whereby the optical portion of the deformable intraocular lens substantially does not come into contact with the hinge portions when the enclosing member is in the open position.

37. An insertion device as claimed in claim 32, wherein the enclosing member comprises hinge portions at two circumferential positions for opening and closing the enclosing member, wherein the enclosing member has grooves, wherein the peripheral edge of the deformable intraocular lens engages the grooves and the grooves support the deformable intraocular lens when the deformable intraocular lens is in the enclosing member and the enclosing member is in the open position, whereby the optical portion of the deformable intraocular lens substantially does not come into contact with the hinge portions when the enclosing member is in the open position.

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